

CLAIMS

What is claimed is:

1. A method for handling data transmissions, said method comprising:
 - generating a codeword by compressing one or more incoming characters;
 - storing said codeword and said one or more incoming characters in a buffer;
 - determining a cost difference between transmitting all codewords previously stored in said buffer and transmitting all characters previously stored in said buffer;
 - in response to said determined cost difference being less than a low limit value, transmitting all characters previously stored in said buffer;
 - in response to said determined cost difference being greater than a high limit value, transmitting all codewords previously stored in said buffer; and
 - in response to said determined cost difference being inclusively between said low limit value and said high limit value, deferring data transmission from said buffer.

1 2. The method of Claim 1, wherein said method is implemented within a modem
2 operating under the V.42*bis* standard.

1 3. The method of Claim 2, wherein said transmitting all characters previously stored
2 in said buffer further includes transmitting all characters previously stored in said buffer
3 via a transparent mode.

1 4. The method of Claim 2, wherein said transmitting all codewords previously stored
2 in said buffer further includes transmitting all codewords previously stored in said buffer
3 via a compressed mode.

1 5. The method of Claim 1, wherein said low limit value is initially set to zero.

1 6. The method of Claim 1, wherein said high limit value is set at a cost in bits for
2 switching to a compressed mode and back to a transparent mode under the V.42*bis*
3 standard.

1 7. The method of Claim 1, wherein said deferring further includes deferring data
2 transmission until a new cost difference is determined based on a subsequent codeword.

1 8. The method of Claim 1, wherein said deferring further includes deferring data
2 transmission until said buffer becomes full.

1 9. The method of Claim 1, wherein said deferring further includes deferring data
2 transmission until data is required to be flushed out of said buffer.

1 10. The method of Claim 1, wherein said method further includes incrementally
2 updating said cost difference as codewords and characters are sent to said buffer.

1 11. An apparatus for handling data transmissions, said apparatus comprising:

2 means for generating a codeword by compressing one or more incoming
3 characters;

4 means for storing said codeword and said one or more incoming characters
5 in a buffer;

6 means for determining a cost difference between transmitting all codewords
7 previously stored in said buffer and transmitting all characters previously stored in
8 said buffer;

9 means for transmitting all characters previously stored in said buffer, in
10 response to said determined cost difference being less than a low limit value;

11 means for transmitting all codewords previously stored in said buffer, in
12 response to said determined cost difference being greater than a high limit value;
13 and

14 means for deferring data transmission from said buffer, in response to said
15 determined cost difference being inclusively between said low limit value and said
16 high limit value.

1 12. The apparatus of Claim 11, wherein said apparatus is a modem operating under the
2 V.42*bis* standard.

1 13. The apparatus of Claim 12, wherein said means for transmitting all characters
2 previously stored in said buffer further includes means for transmitting all characters
3 previously stored in said buffer via a transparent mode.

1 14. The apparatus of Claim 12, wherein said means for transmitting all codewords
2 previously stored in said buffer further includes means for transmitting all codewords
3 previously stored in said buffer via a compressed mode.

1 15. The apparatus of Claim 11, wherein said low limit value is initially set to zero.

1 16. The apparatus of Claim 11, wherein said high limit value is set at a cost in bits for
2 switching to a compressed mode and back to a transparent mode under the V.42*bis*
3 standard.

1 17. The apparatus of Claim 11, wherein said means for deferring further includes means
2 for deferring data transmission until a new cost difference is determined based on a
3 subsequent codeword.

1 18. The apparatus of Claim 11, wherein said means for deferring further includes means
2 for deferring data transmission until said buffer becomes full.

1 19. The apparatus of Claim 11, wherein said means for deferring further includes means
2 for deferring data transmission until data is required to be flushed out of said buffer.

1 20. The apparatus of Claim 11, wherein said apparatus further includes means for
2 incrementally updating said cost difference as codewords and characters are sent to said
3 buffer.